Cape Cod Canal Area
USACE/MassDOT
Update

October 24, 2019

Cape Cod Canal Area

MassDOT Transportation Study

- The study's purpose evaluated existing /future transportation, safety and congestion deficiencies in the Cape Cod Canal Study Area:
  - Included the development and analysis of multimodal transportation alternatives for roadways, transit, bicycle and pedestrian facilities
  - Involved significant coordination with owners of the Bourne and Sagamore Bridges, the US Army Corps of Engineers (USACE) (see below)
- The final report included the study's analytical findings, a recommended plan of transportation improvements, and preliminary cost estimates for these improvements; comments received then posted with final responses Oct. 4, 2019.

USACE Major Rehabilitation Evaluation Report

- The report evaluated the existing bridges and options for preservation, rehabilitation, and/or replacement over the next 50 years; it was released for a 30 day public comment period through Nov. 1st

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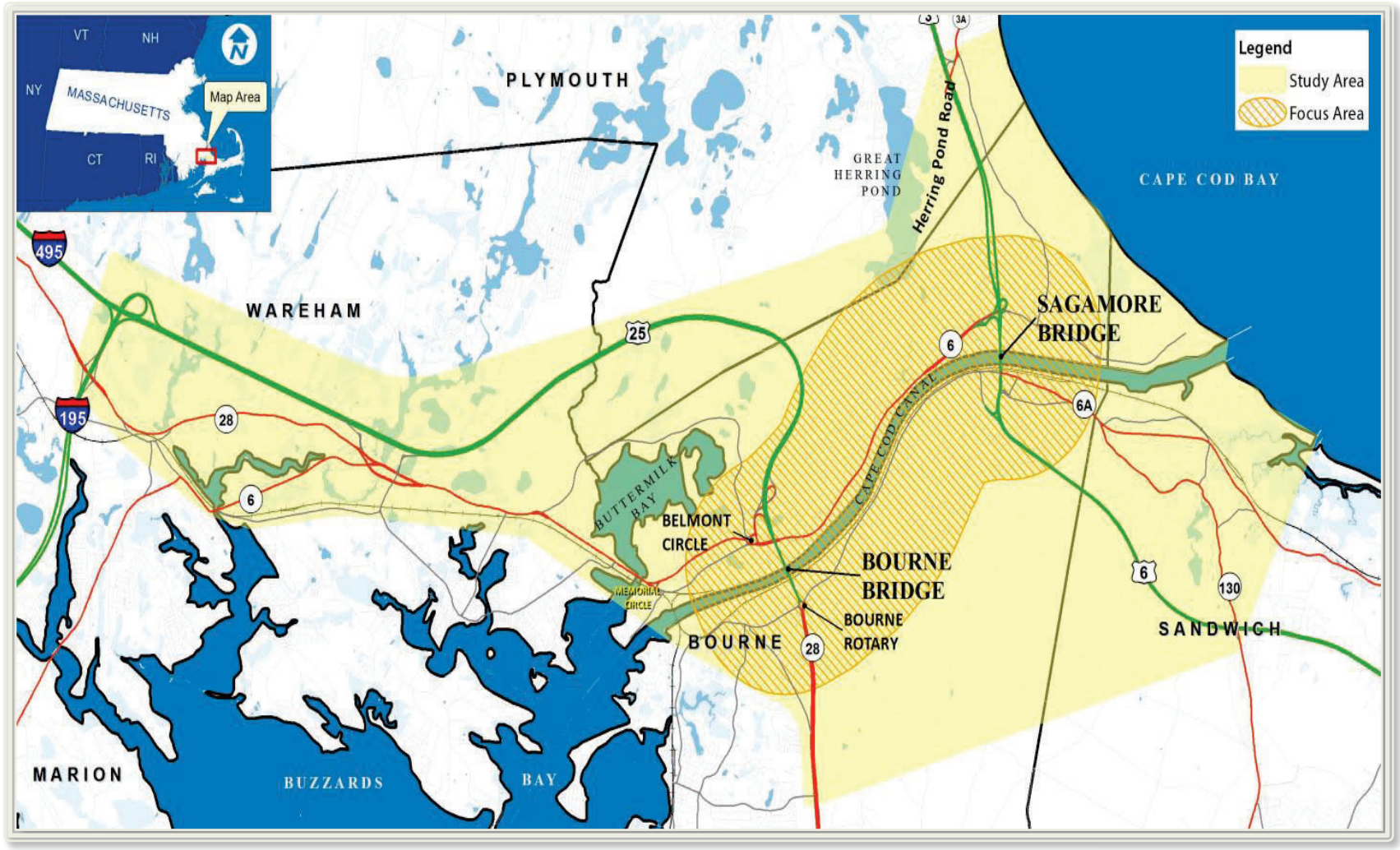
Study Area



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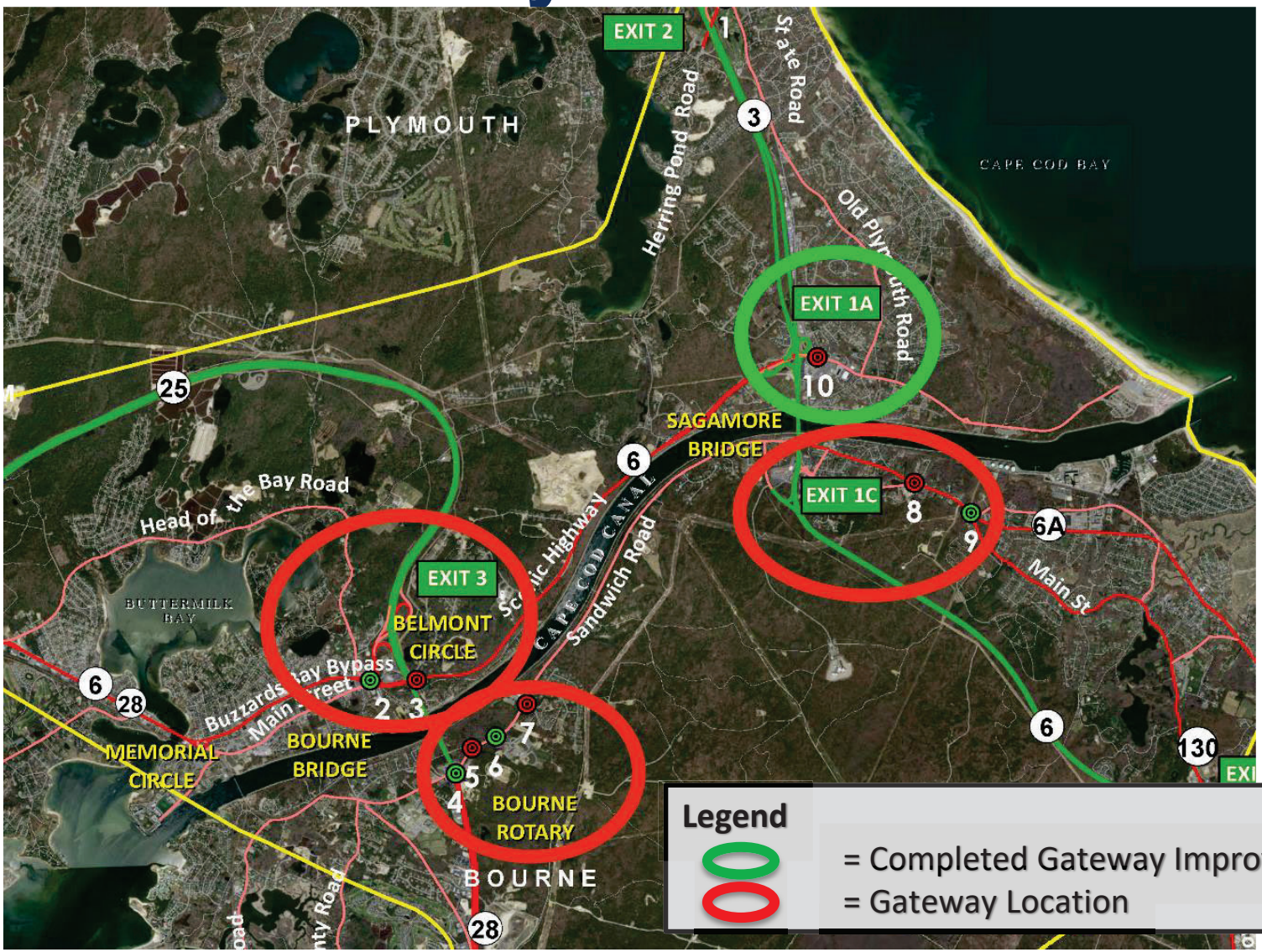
Gateway Locations



Recommended Improvements

Multimodal:

- Bicycle/Pedestrian
- Park & Ride Facilities

Roadway Improvements:

- Local Intersections
- Gateway Locations

Multimodal Recommendations

Bicycle/Pedestrian

- Provide three new additional accessible connections to Cape Cod Canal Bikeway
- Improve bicycle/pedestrian facilities along Cape Cod Regional Transit Authority (CCRTA) bus routes.
- Provide accessible connections along roadway approaches to Sagamore and Bourne Bridges

Multimodal Recommendations

Park & Ride Facilities:

- Construct new Park & Ride lot at Route 6 Exit 2
- Potential new Plymouth & Brockton commuter bus stop
- Provide connection to new Service Road bike path
- Provide bicycle storage facilities.

Recommendations – Local Intersections

Intersection/Signal

Signal Timing / Adaptive Signal Improvements:

- Scenic Highway at Meetinghouse Road
- Scenic Highway at Nightingale Road

Route 6A at Cranberry Highway/Sandwich Road:

- Add new turn lane

Route 130 at Cotuit Road:

- Install traffic signal

Sandwich Road at Bourne Rotary Connector:

- Install new traffic signal and through lane

Recommendations – Gateway Locations

Case 3A Elements:

- Improvements analyzed under Case 3A would provide the greatest long-term benefits to accessibility and mobility for Cape Cod residents, employers, and visitors.
- Would provide a reliable multimodal transportation system in the event of an emergency evacuation
- Improvements focused on improving existing infrastructure, thereby minimizing anticipated impacts.

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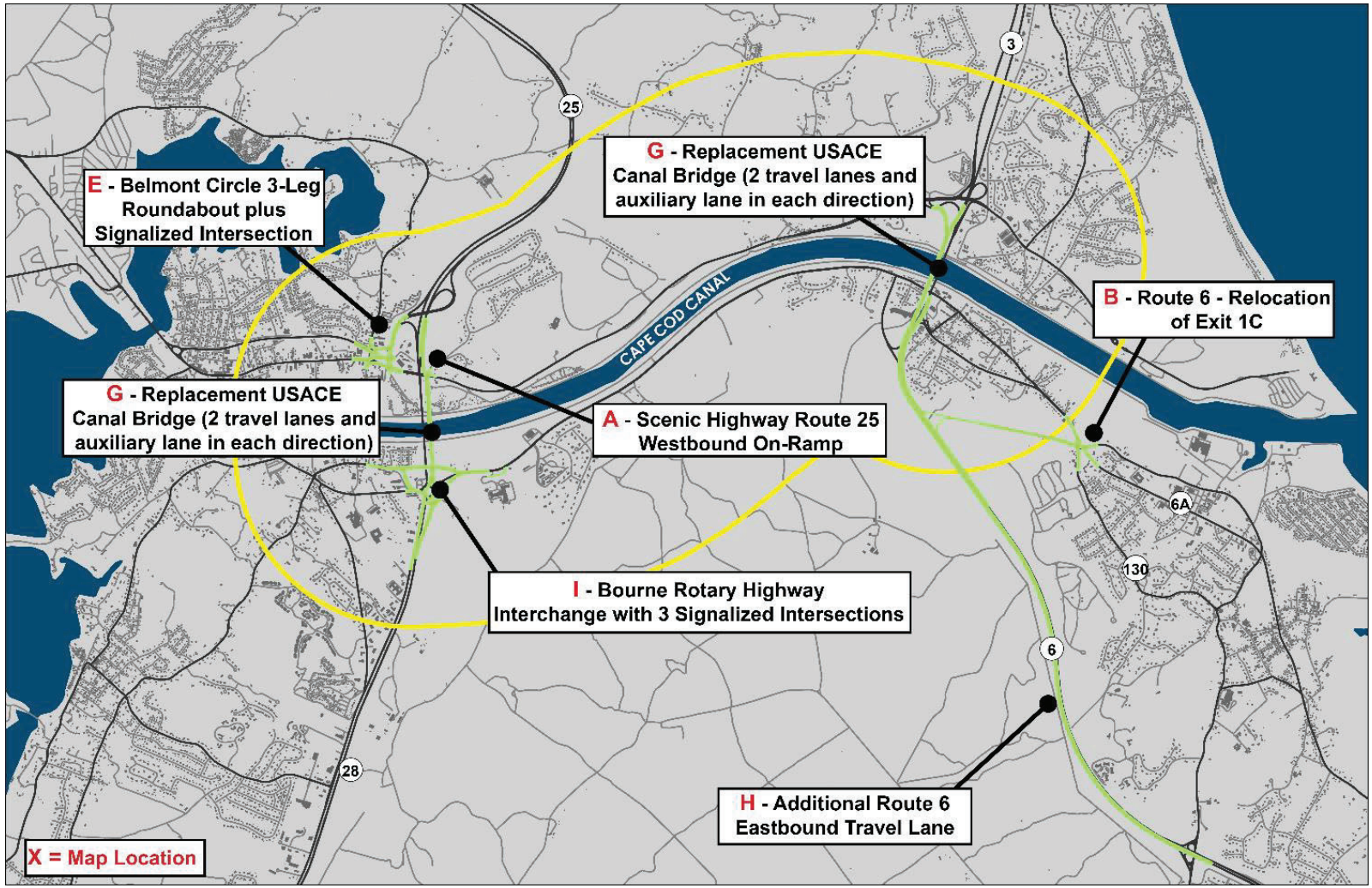
Case 3A Travel Demand Model


E - Belmont Circle 3-Leg Roundabout plus Signalized Intersection
G - Replacement USACE Canal Bridge (2 travel lanes and auxiliary lane in each direction)
B - Route 6 - Relocation of Exit 1C
CAPE COD CANAL
G - Replacement USACE Canal Bridge (2 travel lanes and auxiliary lane in each direction)
A - Scenic Highway Route 25 Westbound On-Ramp
I - Bourne Rotary Highway Interchange with 3 Signalized Intersections
H - Additional Route 6 Eastbound Travel Lane
X = Map Location
25
3
6A
130
6
28

Elements/Map Locations of Case 3A:

A. New Scenic Highway to Route 25 westbound on-ramp.

B. Relocation of Exit 1C on Route 6 westbound

E. Belmont Circle reconstruction as a 3-leg roundabout with signalized intersection.

H. Construct Route 6 eastbound travel lane to Exit 2.

I. Reconstruct Bourne Rotary as an interchange.

Recommendations – Gateway Locations

Case 3A Elements:

- Improvements analyzed under Case 3A would provide the greatest long-term benefits to accessibility and mobility for Cape Cod residents, employers, and visitors.
- Would provide a reliable multimodal transportation system in the event of an emergency evacuation
- Improvements focused on improving existing infrastructure, thereby minimizing anticipated impacts.

Case 3A Summary and Cost (in millions)

Cost Estimates ($ in millions)		
Location	**2030**	**2040**
Scenic Highway to Route 25 Westbound On-Ramp	$11	$16
Route 6 - Exit 1C Relocation	$51	$75
Belmont Circle Reconstruction	$23	$33
Route 6 Eastbound Travel Lane	$48	$71
Bourne Rotary Interchange	$87	$127
Sagamore Bridge Approach	$64	$95
Bourne Bridge Approach	$84	$125

MassDOT Approach Components

Cost Estimates ($ in millions)		
Location	**2030**	**2040**
Scenic Highway to Route 25 Westbound On-Ramp	$11	$16
Route 6 - Exit 1C Relocation	$51	$75
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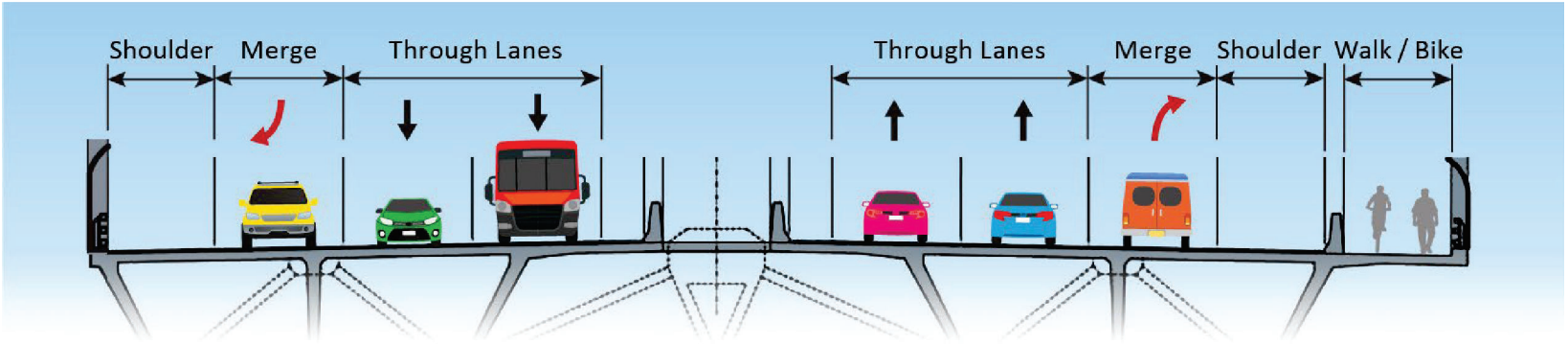
Route 6 Eastbound Travel Lane	$48	$71
Bourne Rotary Interchange	$87	$127
Sagamore Bridge Approach	$64	$95
Bourne Bridge Approach	$84	$125
Total:	$368	$542

From Study to Design

- For Design:
  - $10 million in the 2020-2024 MassDOT CIP
    - Initial Investment
    - Bring design to pre-25% and initiate permitting
  - Sequence recommendations to address regional traffic and to ensure seamless blend into work done through USACE
  - Evaluate and identify environmental impacts/permitting
  - Coordinate projects to be done in advance of USACE actions
- Timeline:
  - 2 year process for initial design work
  - Periodic stakeholder updates at key milestones

US Army Corps of Engineers – Evaluation Study

- Released recommendation on October 3, 2019
- USACE briefed federal legislative officials Sept. 30th
- Conducting five (5) public outreach meetings week of 10/14 & 10/21.
- USACE Recommendation:
  - Replace the Bourne and Sagamore highway bridges with new structures
  - To include the 4 authorized travel lanes and 2 additional auxiliary lanes designed as acceleration/deceleration lanes built to modern highway standards
  - Bike and Pedestrian improvements



Cost Engineering Analysis Total Project Cost Summary

50-YR OPERATIONAL HORIZON

	MAJOR REHAB	REPLACEMENT (4 Lane)	REPLACEMENT (4 Lane + 2 Aux)
Bourne Bridge	$ 817 M	$804 M	$907 M
Sagamore Bridge	$ 687 M	$ 510 M	$ 567 M
Federal Approaches	$ NA	$149 M	$149 M
FEDERAL GRAND TOTAL*	$ 1.504 B	$ 1.463 B	$ 1.623 B

These amounts do not include additional MassDOT projects identified in our Study: Estimated at $350 million

Next Steps – Public Process

USACE public meetings are scheduled during the weeks of 14 and 21 October to get public input on the report. MassDOT has been participating in these meetings.

The Federal Highway Administration (FHWA) Massachusetts Division office and the Eastern Federal Lands Highway Division (EFLHD) are supporting both the USACE and MassDOT Collaboration efforts.

U.S. Army Corps of Engineers Report Milestones

- Conducted five (5) public outreach meetings 10/16-Bourne, 10/17-Plymouth, 10/21-Boston, 10/22-Eastham, & 10/23-Barnstable.
- Finalization of Report – February 2020
- Final determination – Spring 2020

Next Steps – MassDOT Consultant Services

MassDOT has committed $10M in state bond cap to advance to a preliminary design, and has requested $350M for construction in the pending Transportation Bond Bill. That preliminary design work will begin in November 2019.

MassDOT Consultant Milestones

- Selection in Mid-October
- NTP in November
- Scope – Survey, Environmental Mapping, and preliminary engineering

Continued coordination with USACE / FHWA / Federal Lands:

- Determine the size and scope of new bridges
- Prioritize Projects

Questions